

Applicant: ISHIZAKA *et al.*  
Serial No: 10/650,087  
Filing Date: August 28, 2003  
Page: 8 of 12

### REMARKS

By this Amendment, claims 1, 6, 10 and 14 have been amended. No claims have been cancelled or newly added. Therefore, claims 1-26 remain pending, of which claim 17-26 are withdrawn from consideration due to an election to a restriction requirement. In view of the following comments, allowance of all the claims pending in the application is respectfully requested.

### INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement was filed by Applicants on July 30, 2007. To date, however, Applicants have yet to receive a copy of the Form PTO-1449 (that accompanied this submission) signed and initialed by the Examiner indicating that cited references were considered. Accordingly, Applicants respectfully request that the Examiner provide a signed and initialed copy of the Form PTO-1449 for this submission with the next Office Action.

### REJECTIONS UNDER 35 U.S.C. §103

Claims 1-13 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,217,633 to Ohmi *et al.* ("Ohmi") in view of U.S. Patent No. 5,944,049 to Beyer *et al.* ("Beyer"). Applicants traverse this rejection for *at least* the reason that a *prima facie* case of obviousness has not been established.

Although Applicants disagree with the rejection, claims 1, 6 and 10 have been amended to clarify what is being claimed. With this said, Applicants respectfully submit that the cited portions of Ohmi, Beyer, and any proper combination thereof, do not disclose, teach or render obvious a substrate treatment device comprising a treatment chamber in which a substrate is to be placed; a supply system configured to supply at least two kinds of treatment gases to said treatment chamber; an exhaust system having a pump, configured to exhaust the treatment gases from said treatment chamber; a capturing unit, interposed between said treatment chamber and said pump and containing fine grains, the capturing unit configured to capture by the fine grains at least one kind of the treatment gas exhausted from said treatment chamber; and a trap with a cooled plate member therein provided on an upstream side of said

Applicant: ISHIZAKA *et al.*  
Serial No: 10/650,087  
Filing Date: August 28, 2003  
Page: 9 of 12

capturing unit, the trap configured to physically absorb powder, as recited in claim 1.

Ohmi is directed to a process and an apparatus for recovering a noble gas contained in an exhaust gas from a noble gas employing system. In particular, the cited portions of Ohmi teach a process chamber 1 and a film-forming gas source 61 that is connected to the process chamber 1 via a flow regulator 62 and a mixer 63. A gas source 10 for supplying the noble gas is provided downstream of the film-forming gas source 61. A recovery pump 36 is connected with the process chamber 1 via a turbo-molecular pump 11a and a detoxicator 73 is provided downstream of the recovery pump 36 and the process chamber 1. Upon the initiation of the noble gas and the film-forming gas into the process chamber 1, the valve 34a is opened and the valve 34b is closed so that the exhaust gas flowing through the pressure reducing line 17 is sucked by the recovery vacuum pump 36 through the valve 34a and flowed into the detoxicator 73. In the detoxicator 73, components to be removed such as metal particles and reactive gases are removed and detoxicated. *See*, Figure 3 and column 10 of Ohmi. However, the cited portions of Ohmi do not teach or render obvious a substrate treatment device comprising, *inter alia*, a trap, with a cooled plate member therein provided on an upstream side of said capturing unit, the trap configured to physically absorb powder, as recited in claim 1.

The cited portions of Beyer do not remedy the deficiencies of Ohmi. In particular, the cited portions of Beyer merely teach regulating pressure in a chamber by either controlling an exhaust pressure at an exhaust side of a first vacuum pump or an internal pressure at a compression stage of the first vacuum pump. The cited portions of Beyer do not teach or render obvious the feature of "a trap, with a cooled plate member therein provided on an upstream side of said capturing unit, the trap configured to physically absorb powder", as recited in claim 1.

Moreover, Applicants respectfully submit that the cited portions of Ohmi, Beyer, and any proper combination thereof, do not disclose, teach or render obvious a substrate treatment device comprising a treatment chamber in which a substrate is to be placed; a supply system configured to supply at least two kinds of treatment gases to said treatment chamber; an exhaust system having a pump, configured to exhaust the treatment gases from said treatment chamber; a capturing unit interposed between said treatment chamber and said pump,

Applicant: ISHIZAKA *et al.*  
Serial No: 10/650,087  
Filing Date: August 28, 2003  
Page: 10 of 12

configured to capture by a chemical action at least one kind of the treatment gas exhausted from said treatment chamber; and a trap, with a cooled plate member therein provided on an upstream side of said capturing unit, the trap configured to physically absorb powder, as recited in claim 6.

Furthermore, Applicants respectfully submit that the cited portions of Ohmi, Beyer, and any proper combination thereof, do not disclose, teach or render obvious a substrate treatment device comprising a treatment chamber in which a substrate is to be placed; a supply system configured to supply at least two kinds of treatment gases to said treatment chamber; an exhaust system having at least one pump, configured to exhaust the treatment gases from said treatment chamber; an inert gas supply system configured to supply an inert gas into said exhaust system that is on a downstream side of the pump on a final stage; a capturing unit interposed between said treatment chamber and said pump, configured to capture by a chemical action at least one kind of the treatment gas exhausted from said treatment chamber; and a trap, with a cooled plate member therein provided on an upstream side of said capturing unit, the trap configured to physically absorb powder, as recited in claim 10.

Claims 2-5, 7-9 and 11-13 depend from claims 1, 6 and 10, respectively. As discussed above, the cited portions of Ohmi, Beyer, and any proper combination thereof, do not disclose, teach or render obvious the features of claims 1, 6 and 10. Claims 1, 6 and 10 are therefore allowable. Thus, claims 2-5, 7-9 and 11-13 are allowable by virtue of their dependence on claims 1, 6 and 10, respectively, and for the additional features they recite.

Thus, Applicants respectfully request that this rejection be withdrawn.

Claims 14-16 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ohmi in view of Beyer and U.S. Patent No. 5,879,139 to Hayashi *et al.* ("Hayashi"). Applicants traverse this rejection for *at least* the reason that a *prima facie* case of obviousness has not been established.

Applicants respectfully submit that the cited portions of Ohmi, Beyer, Hayashi and any proper combination thereof, do not disclose, teach or render obvious a substrate treatment device comprising a treatment chamber in which a substrate is to be placed; a supply system

Applicant: ISHIZAKA *et al.*  
Serial No: 10/650,087  
Filing Date: August 28, 2003  
Page: 11 of 12

configured to supply at least two kinds of treatment gases into said treatment chamber; an exhaust system having at least one pump, configured to exhaust the treatment gases from said treatment chamber; a heater configured to heat said exhaust system that is on a downstream side of the pump on a final stage; a capturing unit, interposed between said treatment chamber and said pump, the capturing unit configured to capture by a chemical action at least one kind of the treatment gas exhausted from said treatment chamber; and a trap, with a cooled plate member therein provided on an upstream side of said capturing unit, the trap configured to physically absorb powder, as recited in claim 14.

As discussed above, the cited portions of Ohmi and Beyer do not teach or render obvious a substrate treatment device comprising, *inter alia*, a trap, with a cooled plate member therein provided on an upstream side of said capturing unit, the trap configured to physically absorb powder, as recited in claim 14. The addition of Hayashi does not remedy the deficiencies of Ohmi and Beyer. The cited portions of Hayashi merely teach a vacuum processing apparatus with a vacuum pump, in which products of reaction in exhaust gas can be prevented from adhering to the inside of the vacuum pump by heating the inside of the vacuum pump to a temperature higher than the temperature at which products of reaction discharged from a process chamber are separated. *See*, Abstract of Hayashi.

Claims 15 and 16 depend from claim 14. As discussed above, the cited portions of Ohmi, Beyer, Hayashi and any proper combination thereof, do not disclose, teach or render obvious the features of claim 14. Claim 14 is therefore allowable. Thus, claims 15 and 16 are allowable by virtue of their dependence on claim 14, and for the additional features they recite.

Thus, Applicants respectfully request that this rejection be withdrawn.

Applicant: ISHIZAKA *et al.*  
Serial No: 10/650,087  
Filing Date: August 28, 2003  
Page: 12 of 12

**CONCLUSION**

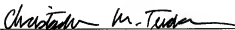
Having addressed each of the foregoing rejections, it is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, the application is in condition for allowance. Notice to that effect is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Date: June 20, 2008

Respectfully submitted,

By:



Christopher M. Tucker  
Registration No. 48,783

PILLSBURY WINTHROP SHAW PITTMAN LLP  
P.O. Box 10500  
McLean, Virginia 22102  
Direct Dial: 703-770-7646  
Main: 703-770-7900  
Fax: 703-770-7901